Work Order ID 104493 D2565-103 *104493*

July-12-13 10:04:30 AM

Item ID: D2565-103 B104493 **Accept** *N900040100* **Setup** **Start** *NS1*

Revision ID:

Item Name: Strut **Stop** *NS2*

Start Date: 8/05/13 **Start Qty:** 5.00 *5* **Cust Item ID:**

Required Date: 8/05/13 **Req'd Qty:** 5.00 *5* **Customer:**

Reference:

Run **Start** *NR1*

Approvals: **Process Plan:** MLJ **Date:** 13-07-16 **Tooling:** ______ **Date:** ______

QC: ______ **Date:** ______ **SPC (Y/N):** ______ **Date:** ______ **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr D2565	**Revision Nbr** Rev E								SB 13/10/10
100 *100* Brake NC	Punch ends and deburr as per dwg NC BRAKE	0.00				5			
Brake NC	**Memo** Punch to length as per Dwg D2565 using DT8313	0.00							
110 *110* Small Fab	Small Fab	0.00				5			PF 13-10-24
Small Fab	**Memo** 1-Drill hole open to .316 Ø as per Dwg D2565 (one end only) 2-Deburr	0.00							
120 *120* QC	QC5- Inspect part completeness to step on W/O	0.00 DAS 27 9-89 13 10 29				5			
Quality Control	**Memo**	0.00							

DQA: ________ Date: ________

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order update only ☐

Work Order: ________	**DISPOSITION**	**AGAINST DEPARTMENT/PROCESS**
Part No. ________	Rework ☐	Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
NCR No. ________	Scrap ☐	Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
	Use-as-is ☐	Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
	Suspected Unapproved ☐	Large Fab ☐ Composite ☐ Supplier ☐ ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear	General			
☐ Bending	☐ Bend	☐ Folio/Program	☐ Outside Dimensions	☐ Pressure/Forced
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance	☐ Set-up
☐ Cracks	☐ Broken/Damage/Defect	☐ Hardware	☐ Part Incorrect	☐ Temperature/Cure
☐ Crimp/Kink/Ripple/Wave	☐ Burrs	☐ Inspection Incomplete/Unqualified	☐ Part Lost/Missing	☐ Weld
☐ Cuffs	☐ Contamination	☐ Instructions Incomplete/Unclear	☐ Part Moved	☐ Wrong Stock Pulled
☐ Crushing	☐ Countersink	☐ Misaligned/off center	☐ Positioned Wrong	
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Power Loss/Surge	☐ Other
☐ Inspection Strip in Tube	☐ Drawing	☐ Misread	________	
☐ Marks/Chatter	☐ Drill Holes	☐ Off-set	________	
☐ Turning Sequence	☐ Finish	☐ Out of Calibration	________	
☐ Wave/Twist in Tube	☐ Fit/Function	☐ Out of Sequence		

Work Order ID 104493 *104493*

July-12-13 10:04:30 AM

Item ID: D2565-103 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Strut

Start Date: 8/05/13 **Start Qty:** 5.00 *5* **Cust Item ID:**

Required Date: 8/05/13 **Req'd Qty:** 5.00 *5* **Customer:**

Reference:

Run Start *NR1*

Stop *NR2*

Approvals: **Process Plan:** ________ **Date:** ________ **Tooling:** ________ **Date:** ________

QC: ________ **Date:** ________ **SPC (Y/N):** ________ **Date:** ________

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel M126125	0.00				5	ϕ	13.10-24	DAS 34 9-89
	Memo START TIME: 2:45 OVEN TEMPERATURE: 400° FINISH TIME: 3:15	0.00							
140 *140* QC Quality Control	QC3- Inspect Part Finish	0.00 DAS 27 9-89							
	Memo	0.00 13.10-25				S			
150 *150* Packaging Packaging	Identify as per dwg & Stock Location: ST253	0.00							
	Memo	0.00				5X	DAS 28 9-89	13-10-25	

DQA: ________ Date: ________

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date:

Work Order update only ☐

Work Order: ____________

Part No. ____________

NCR No. ____________

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function
- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other ____________

Work Order ID 104493 *104493*

July-12-13 10:04:30 AM

Item ID: D2565-103 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID:

Item Name: Strut **Stop** *NS2*

Start Date: 8/05/13 **Start Qty:** 5.00 *5* **Cust Item ID:**

Required Date: 8/05/13 **Req'd Qty:** 5.00 *5* **Customer:**

Reference:

Approvals: **Process Plan:** ________ **Date:** ________ **Tooling:** ________ **Date:** ________ **Run Start** *NR1*

QC: ________ **Date:** ________ **SPC (Y/N):** ________ **Date:** ________ **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160*	QC21- Final Inspection - Work Order Release	0.00				Rm	13/10/29.	/	
QC Quality Control	Memo	0.00							

13-10-25

DQA: __________ Date: __________

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: ____________

Part No. ____________

NCR No. ____________

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
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Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear	General			
☐ Bending	☐ Bend	☐ Folio/Program	☐ Outside Dimensions	☐ Pressure/Forced
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance	☐ Set-up
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☐ Crimp/Kink/Ripple/Wave	☐ Burrs	☐ Inspection Incomplete/Unqualified	☐ Part Lost/Missing	☐ Weld
☐ Cuffs	☐ Contamination	☐ Instructions Incomplete/Unclear	☐ Part Moved	☐ Wrong Stock Pulled
☐ Crushing	☐ Countersink	☐ Misaligned/off center	☐ Positioned Wrong	
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Power Loss/Surge	☐ Other
☐ Inspection Strip in Tube	☐ Drawing	☐ Misread		____________
☐ Marks/Chatter	☐ Drill Holes	☐ Off-set		____________
☐ Turning Sequence	☐ Finish	☐ Out of Calibration		____________
☐ Wave/Twist in Tube	☐ Fit/Function	☐ Out of Sequence		

Picklist Print

July-12-13 10:04:30 AM

Work Order ID: 104493

Parent Item: D2565-103

Parent Item Name: Strut

Start Date: 8/05/13 **Required Date:** 8/05/13

Start Qty: 5.00 **Required Qty:** 5.00

Comments: IPP: F02.04.16Added dwg Rev.C1NG

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304TR0.750W.049 304 RD Tube .750 x .049W		Purchased	No			100	f	466.3989	1.5175	7.986842		SB 13/10/10	

Location		Loc Qty	Loc Code	
MAT017		466.3988825		
	122312	13.3		
	122468	0.0000325		
	124768	56.63245		
	125068	4.5664		
	125513	9.9		
	M126183	382		
	M 126349			10

DQA: ________ Date: ________

DART AEROSPACE

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: ________	**DISPOSITION**	**AGAINST DEPARTMENT/PROCESS**			
Part No. ________	Rework ☐	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
NCR No. ________	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear	General			
☐ Bending	☐ Bend	☐ Folio/Program	☐ Outside Dimensions	☐ Pressure/Forced
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance	☐ Set-up
☐ Cracks	☐ Broken/Damage/Defect	☐ Hardware	☐ Part Incorrect	☐ Temperature/Cure
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☐ Marks/Chatter	☐ Drill Holes	☐ Off-set		
☐ Turning Sequence	☐ Finish	☐ Out of Calibration		
☐ Wave/Twist in Tube	☐ Fit/Function	☐ Out of Sequence		

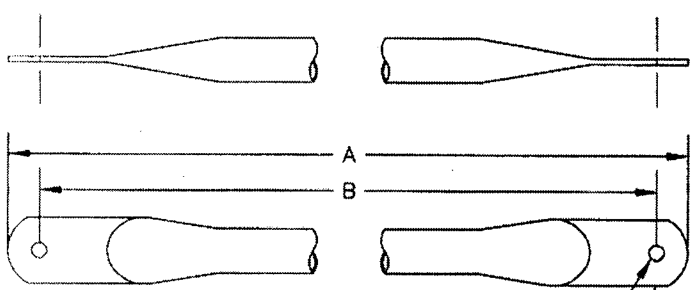
DART

QA COPY ISSUED

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D2565 — REV. E — SHEET 1 OF 1
DATE 04.05.05		TITLE STRUT — SCALE 1:3

REV	DATE	DESCRIPTION
A	96.05.03	NEW ISSUE
B	97.03.15	CORRECT D2565-111 DIM. A
C	98.10.05	UPDATED MATERIAL NOTE (TSR A603)
D	02.06.05	ADD -3XX PARTS; ADD FINISH
E	04.05.05	ADD D2565-401-411; RMV ANGLE D

RELEASED 04.05.05



DIA 0.257 TO BE PUNCHED
"C" DIA TO BE OPENED MANUALLY

PUNCH ENDS PER SPEC CONTROL DRAWING D2638

PART #	A	B	DIA C
D2565-101	20.52	19.72	0.316
D2565-103	18.21	17.41	0.316
D2565-105	20.19	19.39	0.316
D2565-107	13.43	12.63	-
D2565-109	12.31	11.51	-
D2565-111	13.65	12.85	-
D2565-201	22.79	22.00	0.316
D2565-203	20.75	19.95	0.316
D2565-205	21.22	20.42	0.316
D2565-207	16.07	15.27	-
D2565-209	15.16	14.36	-
D2565-211	14.14	13.34	-
D2565-301	27.03	26.23	0.316
D2565-303	25.34	24.54	0.316
D2565-305	23.73	22.93	0.316
D2565-307	20.86	20.06	-
D2565-309	20.17	19.37	-
D2565-311	16.30	15.50	-
D2565-401	18.29	17.49	0.316
D2565-403	15.64	14.84	0.316
D2565-405	19.45	18.65	0.316
D2565-407	10.79	9.99	-
D2565-409	9.34	8.54	-
D2565-411	13.81	13.01	-

SHOP COPY
RETURN TO ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT WITHOUT NOTICE
WORK ORDER
WO 104493 MCS
13-07-16

GENERAL NOTES

1) MATERIAL: AISI 304/316/318 SS 0.750 OD X 0.049 WALL
(REF DART SPEC. M304TR0.750W0.049)
ENSURE SEAMLESS TUBE IS USED
2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3
3) TOLERANCES PER DART QSI 018 UNLESS OTHERWISE NOTED
4) ALL DIMENSIONS ARE IN INCHES

DART AEROSPACE LTD

DART AEROSPACE

Description: Strut	Work Order: 104 493
Inspection Drawing: D 2565 Rev: E	Part Number: D2565-103

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
18.21	+/-.030	18.21	✓		T	SB-5
17.41	+/-.030	17.41	✓		T	SB-5
Ø.316	+/-.005	Ø.316	✓		calp SFab14	FF
Ø.257	+/-.005	Ø.257	✓		calp " "	FF

Measured by: SB	Checked By: DAS 36 9-89	QC inspector: DAS 27 9-89	Engineering Approval (*if necessary*):
Date 13/10/10	Date 13/10/24	Date 13-10-24	Date